

REMARKS

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe the subject matter which applicant regards as the invention.

Claims 1 and 18-24 remain in the application. Claims 2-17 have been cancelled. Claims 18-24 are new and consideration of new claims 18-24 is respectfully requested.

Claim 1 has been provisionally rejected twice on the grounds of obviousness type double patenting. At this time Applicant chooses not to traverse these rejections, but as the rejections are provisional, Applicant reserves the right to traverse these rejections at a later time.

Claim 1 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. 5,543,108 to Bacher et al. (hereinafter Bacher) in view of U.S. 6,231,094 to Uytterhaeghe et al. (hereinafter Uytterhaeghe). For the following reasons, the Examiner's rejection is traversed.

Bacher discloses a microstructured plate-like base body which is made by any known molding procedure and which has a first side serving as a first reference plane and a second side which has plastic microstructures projecting therefrom, and is covered at its second side with a material layer that engages the microstructures, whereupon the material layer is machined to provide a second reference surface parallel to the first reference surface, wherein the base body is then machined

parallel to the second reference surface to expose the microstructures projecting therefrom and the material layer is finally removed selectively with respect to the plastic material to release the microstructured bodies.

Uytterhaeghe discloses a bumper beam obtained by molding a moldable thermoplastic material and a drapeable thermoplastic material having continuous fibers and presented in the form of sheets. The cross-section of the beam presents a developed length that is constant.

Applicant's process uses a replication material which is initially liquid or viscous or plastically deformable. During the replication process (before removal of the replication tool), the material is hardened. The replication is usually done on a substrate. For applicant's optical structures, the thickness of the whole structure (substrate + hardened replication material thereon) is often an important parameter to be controlled, as it influences the optical properties. Spacer portions are provided on the replication tool, wherein spacer portions abut a substrate during the replication process. By this, a thickness control becomes possible: The replication tool itself defines the thickness of the replication material on the substrate and thus also of the thickness of the whole structure (as the thickness of the substrate is well-defined).

Even if the cited references were combined in the manner proposed by the Examiner, the claimed invention would not be taught. Further disclosure would be required. Claim 1 requires a step of providing a replication tool having at least one spacer portion comprising at least a portion arranged between the structural features. Claim 1 further requires a step of bringing a material component in contact with a replication surface while the spacer portion abuts against the first surface of a

substrate.

As stated by the Examiner, Bacher fails to teach or suggest the spacer of the claimed invention. The Examiner states that Uytterhaeghe teaches the required spacer on the far left and right hand sides of the mold as illustrated in Fig. 3A (reproduced below). Applicant respectfully disagrees.

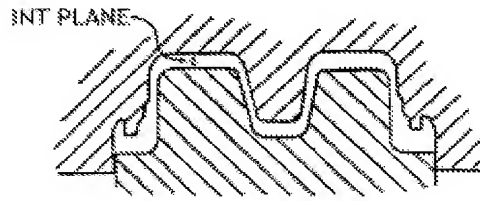


FIG. 3A

The Examiner refers to a "spacer" as a portion of the mold at the left or right end. None of these illustrated portions meet the requirements of the claimed spacer portion however. The spacer portion, as claimed is "arranged between structural features corresponding to different optical elements." The smaller protrusion illustrated does not meet this requirement because it is located directly above the bumper part. The larger portions which are on each end adjacent to and lower than the small protrusion technically are not between two parts, as only one part is illustrated. These portions also don't perform a spacing function. Rather, these portions simply close the mold off against the lateral sides.

Claim 1, as amended, also requires a step of bringing a material component in contact with a replication surface while the spacer portion abuts against the first surface of a substrate while the material component is between the replication tool and the substrate. Again clearly, Bacher does not teach a spacer portion. Uytterhaeghe fails to teach any sort of spacer that is abutting a substrate.

Additionally, neither Uytterhaeghe nor Bacher teach a hardened replication

material adhering to the substrate to form an optical element, as required. First, neither reference teaches forming an optical element. Rather, Uytterhaeghe teaches manufacturing a bumper, and the bumper of course cannot adhere to a substrate or any part of the mold after the process has been completed. Bacher manufactures the final product 16, consisting of a plurality of bodies (Fig. 9), and they have to be removed from all parts of the mold also (see also Bacher, col. 5, lines 37-57).

As the proposed combination of references fails to teach all of the features of amended claim 1, reconsideration and withdrawal of the rejection of claim 1 under §103(a) is respectfully requested.

Claim 3 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Bacher in view of Uytterhaeghe, and further in view of U.S. 5,183,597 to Lu. Claim 3 has been cancelled, but with regard to amended claim 1, Lu fails to cure the deficiencies of Bacher and Uytterhaeghe. Specifically, Lu does not teach about the required spacers.

Regarding new claims 18-24, these claims depend directly or indirectly from claim 1 and thus are believed to be allowable at least for the reasons stated above.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 18-0160, our Order No. FRG-16141.

Respectfully submitted,

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